The American Holistic Nurses Association (AHNA) supports the Center for Disease Control (CDC) and the World Health Organization (WHO) in acknowledging the immediate global public health risk of the COVID-19.

This update is intended to provide our members with the most accurate and up to date information on the date of issuance.

Clinical Updates

The following information is obtained from:

- Coronavirus Disease 2019 (COVID-19) Overview - for health professionals; updated regularly
- Expert PubMed Searches for COVID-19 Research Articles - updated daily

Asymptomatic and Pre-Symptomatic Infection

Several studies have documented SARS-CoV-2 infection in patients who never develop symptoms (asymptomatic) and in patients not yet symptomatic (pre-symptomatic). One study found that as many as 13% of RT-PCR-confirmed cases of SARS-CoV-2 infection in children were asymptomatic. Patients may have abnormalities on chest imaging before the onset of symptoms. Although transmission of SARS-CoV-2 from asymptomatic or pre-symptomatic persons has been reported, risk of transmission is thought to be greatest when patients are symptomatic. Viral RNA shedding, measured indirectly by RT-PCR cycle threshold values, is greatest at the time of symptom onset and declines over the course of several days to weeks.

Diagnostic Flags:
Most common: lymphopenia (83% of hospitalized patients).
Associated with greater illness severity: Lymphopenia, neutrophilia, ↑ serum alanine aminotransferase (ALT), aspartate aminotransferase (AST), and lactate dehydrogenase (LDH), ↑ C-reactive protein (CRP), ferritin. Associated with greater mortality: ↑ D-dimer and lymphopenia can be indicative of the onset of lung fibrosis; contributing to long term damage in recovered patients. Chest Xray (CXR) Bilateral air-space consolidation, May be unremarkable early in the disease Chest CT Bilateral, peripheral ground glass opacities - a non-specific pattern seen in other infections.

Common Symptoms:
Biphasic symptoms: Emergency patients are reporting mild self-resolving symptoms with subsequent severe, unexpected, rapid onset of shortness of breath
Signs and Symptoms identifying COVID-19: Fatigue (44-70%) Fever (83-98%) Dry, typically non-productive cough (59-82%) Anorexia (40-84%) Anosmia or Ageusia preceding respiratory symptoms, Shortness of breath (31-41%) Myalgia (11-35%) Less common (< 10%); Sore throat, diarrhea, emesis, nausea, Dizziness, Headache.

Interpretation

- Detection of SARS-CoV-2 RNA by RT-PCR: Detection better in nasopharynx compared to throat samples and lower compared to upper respiratory samples. A single negative, upper respiratory RT-PCR result, does not exclude infection: Repeat sampling and testing or lower respiratory tract specimen is strongly recommended in severe or progressive disease.
- Detection in blood may be a marker of severe illness
- Viral RNA shedding is 7-12 days in moderate cases, may be longer for older persons and those who had severe illness requiring hospitalization (12-20 days).

Clinical Progression

Mean duration of development of symptoms in Patients with Severe disease progression:
Dyspnea: 5-8 days. Acute respiratory distress syndrome (ARDS): 8-12 days. ICU admission: 10-12 days. Patients can rapidly deteriorate one week after illness onset. Mortality among ICU/CCU admissions: 39%-72% Median length of hospitalization among survivors: 10-13 days.

PRE-EXISTING CONDITIONS
CDC's Morbidity and Mortality Weekly Report reaffirmed the link of underlying health conditions predicting severe outcomes in COVID-19. The US CDC COVID-19 Response Team evaluated data on 122,653 US COVID-19 patients identified between February 12 and March 28. Despite representing just over a third of the data set, patients with at least one underlying health condition were 78% of Covid-19 related ICU admissions, 73% of Covid-19 related admissions had existing diabetes, cardiovascular and/or chronic lung disease.

Specific COVID-19 treatment: There is no current evidence from RCTs to recommend any specific treatment for patients with suspected or confirmed COVID-19: Antiviral drugs commonly used in clinical practice, including ganciclovir, acyclovir and ribavirin, are not currently recommended for SARS-CoV-2.

WHO and the Surviving Sepsis Campaign have produced guidelines for inpatient and ICU management of patients with COVID-19:

- Clinical management of severe acute respiratory infection in COVID-19 - WHO
- Guidelines on the Management of Critically Ill Adults with Coronavirus Disease 2019 (COVID-19) - Surviving Sepsis Campaign

Treatment Research

- Convalescent plasma: in an uncontrolled case series of 5 critically ill patients with COVID-19 and ARDS, administration of convalescent plasma containing neutralizing antibody was followed by improvement in clinical status. [31] Other Convalescent Plasma Clinical Trials are underway.
- Hydroxychloroquine and chloroquine inhibit growth of SARS-CoV-2 in vitro, but no clinical trials have demonstrated conclusively their effectiveness in humans. See Chloroquine / Hydroxychloroquine in Coronavirus COVID-19.
- Remdesivir (Gilead), an investigational IV drug with broad antiviral activity, is being investigated in multiple clinical trials. In the US, it can be obtained as part of participation in a clinical trial.
- Lopinavir-ritonavir (AbbVie; Kaletra, Aluvia) showed "no benefit" in hospitalized adult patients with severe COVID-19 according to a study published in the New England of Journal of Medicine. [32] Many other trials are underway, see Lopinavir-Ritonavir Clinical Trials.
- Tocilizumab (Genentech; Actemra) a monoclonal antibody which blocks the IL-6 signalling pathway is being investigated in a number of Tocilizumab Clinical Trials.
- Favipiravir (Toyama Chemical; Avigan), an antiviral drug under study alone and in combination with tocilizumab, see Favipiravir Clinical Trials.
- Systemic corticosteroids are under investigation in clinical trials. Some authors advise that they should not be given routinely for the treatment of COVID-19.
- Ibuprofen https://www.npr.org/sections/health-shots/2020/03/18/818026613/advice-from-france-to-avoid-ibuprofen-for-covid-19-leaves-experts-baffled "the evidence that taking ibuprofen increases [the affected COVID-19] receptors is almost nonexistent. This is why we have clinical trials to inform our medical decision-making rather than relying on a few anecdotal cases, says Dr. Krutika Kuppalli, an infectious disease physician and fellow with the Johns Hopkins University Center for Health Security. Kuppalli says she doesn't see a published article from, The Lancet, as a reason to avoid ibuprofen.

Show me the research: Search PubMed for Coronavirus / COVID-19 Research Articles

**COVID-19 vs. Influenza**

Per CDC director, Robert Redfield, MD, “This virus does have the ability to transmit far easier than flu. It's probably now about three times as infectious as flu.” Comparisons of case fatality ratios for SARS, COVID-19, vs. seasonal influenza in different age groups are below. Even though the fatality rate is low for younger people, it is very clear that any suggestion of COVID-19 being just like influenza is false: even for those aged 20-29 years, once infected with SARS-CoV-2, the mortality rate is 33 times higher than that from seasonal influenza; The Lancet Infectious Diseases DOI: (10.1016/S1473-3099(20)30257-7)
For people aged 60 years and older, the chance of survival following SARS-CoV-2 infection is approximately 95% in the absence of comorbid conditions. [https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30257-7/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30257-7/fulltext)

However, the chance of survival will be considerably decreased if the patient has underlying health conditions, and continues to decrease with age beyond 60 years, Redfield reports new evidence that a significant number of individuals that are infected actually remain asymptomatic; as many as 25%. “It also appears that we're shedding significant virus in our oropharyngeal compartment, probably up to 48 hours before we show symptoms.” [https://www.npr.org/sections/health-shots/2020/03/31/824155179/cdc-director-on-models-for-the-months-to-come-this-virus-is-going-to-be-with-us](https://www.npr.org/sections/health-shots/2020/03/31/824155179/cdc-director-on-models-for-the-months-to-come-this-virus-is-going-to-be-with-us)

### Infection Control

**EVIDENCE REVEALS OUTDATED INFECTION CONTROL GUIDELINES:**

Despite maximum containment policies being enforced, the rapid international spread of COVID-19 suggests current theory may not accurately reflect what occurs with respiratory emissions, contributing to the ineffectiveness of current infection control measures.

A new study published in the Journal of the American Medical Association, says six feet may not be enough to avoid spreading the virus. HISTORY LESSON: In 1930, William F. Wells focused on tuberculosis transmission in the 1930s and dichotomized respiratory droplet emissions into "large" and "small" droplets emitted upon exhalation. In this model, as small droplets transition from the warm and moist conditions of the respiratory system to the colder and drier outside environment, they evaporate and form residual particulates made of the dried material from the original droplets. Infection control strategies were developed based on whether a respiratory infectious disease is primarily transmitted via the large or the small droplet route. **Adopted by the global Health agencies, these premise underlie current risk management precaution recommendations, and the allocation of resources for response management- including for COVID-19.**

Recent research demonstrated that exhalations, sneezes, and coughs not only consist of muco-salivary droplets following short-range semi-ballistic emission trajectories but, **importantly are primarily made of a multiphase turbulent gas (a puff) cloud that entrains ambient air and traps and carries within it clusters of droplets with a continuum of droplet sizes.** Lydia Bourouiba, PhD, an associate professor at the Massachusetts Institute of Technology (MIT), found exhalations cause gaseous clouds that can travel up to 27 feet. Peak exhalation speeds can reach 33 to 100 feet per second.

Currently used surgical and N95 masks are not tested for these potential characteristics of respiratory emissions; the cloud is only partially mitigated by sneezing or coughing into one's elbow. This research calls for improved measures to protect the healthcare workers.
The locally moist and warm atmosphere within the turbulent gas cloud allows the contained droplets to evade evaporation for much longer than occurs with isolated droplets. Under these conditions, the lifetime of a droplet could be considerably extended by a factor of up to 1000, from a fraction of a second to minutes. https://jamanetwork.com/journals/jama/fullarticle/2763852?appId=scweb

Pertinent Conclusion: a New Model for Respiratory Emissions is warranted.

- Clinicians without proper PPE devised an "aerosol box," which consists of a transparent plastic cube designed to cover a patient's head and that incorporates two circular ports through which the clinician's hands are passed to perform the airway procedure. The dimensions of the box are provided here, https://www.nejm.org/doi/suppl/10.1056/NEJMc2007589/suppl_file/nejmcc2007589_appendix.pdf available with the full text, and demonstration, at https://www.nejm.org/doi/10.1056/NEJMdc0005741/full/?requestType=popUp&relatedArticle=10.1056%2FNEJMcc2007589

- The American Journal of Tropical Medicine and Hygiene provided an overview of research by the University of Nebraska Medical Center (UNMC). The article published lessons and recommendations for implementing research studies in the midst of response activities for health emergencies. It includes design, review, oversight, and early implementation. "Conducting research in the midst of health emergencies can provide vital information to support response operations, and these lessons can support other institutions in their research efforts. UNMC built on knowledge from experience during the West Africa Ebola epidemic." Results stress establishing systems and protocols in advance of a health emergency was important in rapidly facilitating emergent research studies.

- University of Minnesota and Mayo Clinic may soon release an antibody test that can determine if people have already been infected by the coronavirus that caused COVID-19 and are no longer threats to get or spread the infection. https://www.minnpost.com/glean/2020/03/u-of-m-mayo-readying-covid-19-antibody-test/

Vulnerable Populations

"Social justice demands that needed supplies and countermeasures are distributed equitably, with steps to ensure that poorer and marginalized populations-segments of the population traditionally left behind, like people with disabilities and people of color-receive a fair distribution of scarce resources," https://onlinelibrary.wiley.com/doi/full/10.1002/hast.1090

"Fair distribution is not only a national issue. Globally, lower-income countries will face scarcity more so than wealthier countries, and, if COVID-19 takes hold, a higher burden of disease. The United States is ethically obligated to assist-even if this means reducing American stockpiles- to maximally protect and equally value all human life...

Vitally needed supplies like personal protective equipment, vaccines and treatments, must not be hoarded by wealthier countries or the countries where they happen to be manufactured," WHO ethical guidelines: http://apps.who.int/iris/bitstream/10665/250580/1/9789241549837-eng.pdf?ua=1

"This is a matter not only of ethics but also of ensuring Americans' health... even if we get COVID-19 well under control in the United States, new outbreaks here will be inevitable unless other countries do so as well." L.Gostin, E.Friedman, S.Wetter, (3/2020)

The CDC updated guidance for a broad scope of COVID-19 at-risk populations, including:

- Addiction / Substance Use increases risk for severe complications from COVID-19. Specifically, smoking or vaping, methamphetamine addiction, and opioid use: Chronic opioid administration increases the risk of slowed breathing due to hypoxemia, leading to cardiac and pulmonary complications, overdose and death.
  - Addiction Recovery: physical distancing measures, while critical to COVID-19 mitigation, eliminate the important element of social support needed for addiction recovery. Additionally, distancing measures may cause barriers to obtaining medications (buprenorphine or methadone) or syringe services programs. https://annals.org/aim/fullarticle/2764313/collision-covid-19-addiction-epidemics
  - Solution: deployment of virtual support meetings for those with internet access and the possibility of take-home medications for some people in addiction treatment.
**Homeless:**

**Inmates and Migrant Detainees:** Living conditions in detention centers and prisons, including prolonged close contact and variable hygiene and sanitation standards, place these populations at elevated risk for transmission of communicable diseases, particularly respiratory infections. Several states are taking this into account: California is expediting the release of individuals that will soon be eligible for parole, which could facilitate the release of 3,500 prisoners. Connecticut published a plan to release eligible inmates a week before it reported its first COVID-19 case in an incarcerated individual. Nebraska suspended visitation and ensure that no more than 10 people occupy any space, and, work program inmates have begun producing hand sanitizer, gowns, and facemasks for use by the Department of Correctional Services and other government agencies.

**Pediatrics:** Information for Pediatric Healthcare Providers - CDC

**Guidelines for the Management of Septic Shock and Sepsis-Associated Organ Dysfunction in Children** - Surviving Sepsis Campaign

**Obstetrics:** [https://www.midwife.org/responding-to-covid-19](https://www.midwife.org/responding-to-covid-19)

**Hemodialysis:** [Interim Additional Guidance for Infection Prevention and Control Recommendations for Patients with Suspected or Confirmed COVID-19 in Outpatient Hemodialysis Facilities](https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-hemodialysis.html)

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**Global Updates**

COVID-19 Global Cases as of Tuesday 4/7/2020
https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html?fbcid=1wAR0MR1BHPWbTbVFSw01Vq2UkhXQn4rT-Wb7uSH3ikG0YjIfohQfUxW3lzo#/bda7594740fd40299423467b48e9ecf6

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APRIL 7th at 11:00am CST, JHCHS tracker reports 1,365,004 confirmed COVID-19 cases and 76,507 deaths globally; a fatality increase of nearly 50,000 in a week.

johnshopkins@centerforhealthsecurity.ccsend.com

- Italy extended its national "lockdown" to April 13. While the country has recently dropped in daily cases and deaths, health systems are still experiencing significant COVID-19 impact. Fines for violating the social distancing are over US$200. Officials indicated that some form of required social distancing measure could be in place 6 months, gradual easing when the time is appropriate.
- Despite government claims of substantial warning, citizens of China went out into National Parks in mass exodus after home quarantine was relaxed:
The rapid implementation of lockdown measures in India, has led to supply chain disruption; delivery drivers and other essential workers have reduced their work and many face challenges in accessing food due to the restrictions.

Reports emerged that in Guayaquil, Ecuador police are retrieving bodies of COVID-19 victims from the street and sidewalks.

United States

UNITED STATES COVID-19 CASE DATA: 369,069 cases, 20,003 recovered, 11,018 deaths

Per JHCHS Tracker 7 April 2020 at 11:11 CST
https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html?v=2.0&fbclid=IwAR0MR1BHWPbTvVFSw0IVq2UkHXQNi4rT-Wb7uSH3ikG0YJfohQfLxW31zo#/bda7594740fd40299423467b48e9ecf6

The Institute for Health Metrics and Evaluation (IHME) updated model of projection anticipates 81,114 deaths (95% UI: 38k-102k) over the next 4 months, under continued and effective implementation of social distancing measures.


New from the CDC
DEPARTMENT OF DEFENSE COVID-19 REPORTING

Military units, bases, and Combatant Commands ceased reporting detailed COVID-19 data due to concern of signaling potential vulnerabilities.

Georgia

Gov Brian Kemp, issued a shelter-in-place order two weeks ago. Friday he retracted it opening beaches and parks. Tybee Island Mayor Shirley Sessions, refused, citing protection of the islands high risk elderly population and the waves of northerners from highly infected states.

Virologists have broken down the COVID19 physiology.

The NY Times offered a digital photo tutorial of viral proteins / components and the role each serves in the COVID-19 infectious process. The article is a valuable stride toward making COVID-19 destructivity clear to the public. [Link]

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**GENETIC CAMOUFLAGE:** NSP10

Human cells have antiviral proteins that find viral RNA and shred it. This protein works with NSP10 to camouflage the virus's genes so that they don't get attacked.

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**Escape Artist:** ORF3a

The SARS-CoV-2 genome also encodes a group of so-called "accessory proteins." They help change the environment inside the infected cell to make it easier for the virus to replicate.

The ORF3a protein pokes a hole in the membrane of an infected cell, making it easier for new viruses to escape. It also triggers inflammation, one of the most dangerous symptoms of Covid-19.

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**Nurse Preparedness**

The University of Nebraska Medical Center Healthcare and Emergency Responder Organization Education through Simulation (HEROES) program advises,

"it is important to brush up on your emergency preparedness and isolation skills. We've learned through our pilot studies that people often think they're better at donning and doffing respirators than they actually are. They may not be sure where to place the straps of the respirator-the top strap on the top of the head and the bottom strap against the skin of the neck. Grooming and hairstyles also can affect safety. Loose hairstyles can impact control during the doffing process, which is critical to safety. In order for a respirator to seal properly, the face must be clean shaven every day, especially where the respirator touches the face," HEROES Director Beth Beam, [Link]

Protecting yourself and your patients is difficult under normal circumstances, more so during an emergency or without complete information. The National Institute of Health has released: Protecting Yourself from COVID-19 in the Workplace Training Tool. Recognizing the need for nurse specific training, The American Nurses Association (ANA) created an on-demand webinar with Terri Rebbman, Phd, RN, CIC, FAPIC and, Kendra McMillian MPH, RN, explaining emergency guidelines for healthcare resource management, personal protective equipment, and best practice safe usage of limited resources:

**ANA On-Demand Webinar, Time Burden 60 min.**
[Link]

Important ANA Webinar Take-Aways:

- A single N95 mask can be reused (donned/doffed) 5 times before beginning to allow air passage; research participants were able reuse a single mask safely up to 20 times
- Store an N95 in a paper sack, by itself, without 'wrapping' the bag or item around it
- Most staff who self-infect do so by improper removal of face masks

[Quick "How to DON / DOFF properly" Demo from HEROES program](https://app1.unmc.edu/nursing/heroes/mpv.cfm?updateindex=131&src=yt)

NOTE: Though current CDC guidelines are not 'ideal', CDC optimization strategies for healthcare personal protective equipment are based upon emergency preparedness and the knowledge that resources will need to be rationed. The goal of a government in a pandemic or mass casualty situation becomes prevention/protection with any available resource. **This information is not given to imply nurses should 'settle' for subpar protection. Please see our 'Advocacy' section to speak up for PPE.**

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**Shortages and Solutions**

**VENTILATORS:**
Hospitals across the United States, if not already affected, face shortages of life-saving ventilators. The US government recently invoked the Defense Production Act in an effort to speed production and delivery by General Motors. Other entities are actively pursuing alternative products to mitigate the shortfall.

- Researchers at the Massachusetts Institute of Technology revived a project from several years ago to develop a makeshift ventilator using “ambu” resuscitation bags. The design runs about $400-$500 in supplies. The team intends to share its design instructions free of charge. The units are not yet FDA-approved, but this is in progress.

- Employees at 2 General Electric facilities in Massachusetts reportedly staged protests to demand that they be able to manufacture ventilators. The facilities, originally designed to produce aircraft jet engines, are currently sitting idle, and the workers want those facilities to be converted to manufacture ventilators- protests follow an announcement by GE that it will lay off 10% of its “domestic aviation workforce” as well as "temporary" layoffs for maintenance personnel in an attempt to save the company money.

- A company in Texas produces "helmet-style ventilation devices" that do not require invasive intubation. Reportedly, Italian clinicians have indicated that they provide benefit for COVID-19 patients who do not yet require mechanical ventilation.

N95 MASKS:

- The Department of Homeland Security and US President Donald Trump, have confirmed that the Strategic National Stockpile (SNS) is running low on supplies and equipment citing it was not intended to support 50 states. **To try to secure sufficient domestic supply the US may suspend overseas aide (USAID)**

- Billings, Montana dentist, Spencer Zaugg, and his son Colton, together with Dr. Dusty Richardson, collaborated to design masks on a 3D printer. Their finalized design and process, is free on www.makethemasks.com. Produced in plastic and different sizes, they cost $1 to create and can be wiped down and sanitized for multiple uses. [https://www.aha.org/other-resources/2020-04-02-3d-printing-make-reusable-plastic-surgical-masks](https://www.aha.org/other-resources/2020-04-02-3d-printing-make-reusable-plastic-surgical-masks)

While the FDA has not verified the Montana mask as equivalent to N95 protection, the creators have released their FIT testing results to the public: [https://www.makethemasks.com/mask-test-results](https://www.makethemasks.com/mask-test-results)

- The US CDC published preliminary guidance regarding the decontamination and reuse of respirators; Based on the available evidence they identified vaporous hydrogen peroxide (VHP), ultraviolet germicidal irradiation (UVGI), and moist heat as the preferred decontamination methods.

- #100millionmasks 100 Million Mask Challenge launched from Providence, in Washington State, where they have seen a tremendous outpouring of support. Providence collaborated with Kaas Tailored, a local furniture manufacturer, now producing much needed personal protective equipment for health care workers. The American Hospital Association is expanding the 100 Million Mask Challenge nationwide calling on manufacturers, the business community and individuals across the country to coordinate efforts, facilitate new relationships with hospitals and health systems and rapidly produce needed PPE on a large scale for our nation's health care heroes.

MEDICATIONS:

Due to increased demand, sedative drugs are in short supply. There may be alternatives that could mitigate these shortages. [https://www.statnews.com/pharmalot/2020/03/31/a-new-covid-19-problem-shortages-of-medicines-needed-for-placing-patients-on-ventilators/](https://www.statnews.com/pharmalot/2020/03/31/a-new-covid-19-problem-shortages-of-medicines-needed-for-placing-patients-on-ventilators/) "There has been a 51% increase in demand so far this month for half a dozen different sedatives and anesthetics: propofol, dexmedetomidine, etomidate, ketamine, lorazepam, and midazolam.

But the fill rate dropped from 100% at the beginning of the month to just 63% on March 24. The demand for hydromorphone, fentanyl, and morphine rose 67% while the fill rate fell from 82% to 73% and demand for neuromuscular blockers cisatracurium, rocuronium, succinylcholine chloride, and vecuronium, rose 39%, while the fill rate plummeted. While staff are questioning manufacturing delays, many drugs were already short supply before COVID-19.


- Report a Drug Shortage: DRUGSHORTAGES@fda.hhs.gov
LABORATORY TESTING:
The United States has steadily increased testing capacity to over 100,000 tests per day nationwide, however there are still reported lengthy delays in obtaining test results and an inability to access supplies needed to conduct the tests. Germany reported avoiding this by having unrestricted access to privatized independent testing facilities. The United States initial response utilized only a network of government approved laboratory facilities. To this point the FDA has not approved any of the advertised home kits on the market.

Shortages and Solutions: Healthcare Worker Staffing

ADEQUATE HEALTHCARE STAFFING: The greatest challenge to quality care

What good are extra ventilators if there is no one to care for the intubated patients?

"Hospitals should be working round the clock to prepare extra personnel," said Eric Toner, MD, senior scholar at Johns Hopkins Center for Health Security in Baltimore and co-author of papers on hospital preparedness in Clinicians' Biosecurity News, http://www.centerforhealthsecurity.org/cbn/2020/cbnreport-02272020.html

"During an epidemic, the healthcare workforce is greatly reduced...workers face a high risk of infection because of contact with infected patients; many need to stay home to care for sick relatives, and, in the absence of vaccine... others might fear coming to work lest they bring a lethal infection home to their families. The provision of medical services to both COVID-19 and non-COVID-19 patients may be adversely affected in most communities."

Dr. Toner recommends using the calm before the storm to prepare, thus lessening the impact:

- Employ at least 1 full-time hospital emergency manager in each hospital. Augment clinical staff with nontraditional personnel, employing "just in time" education and "buddy teaming."
- Prioritize which services and types of procedures can be deferred, & process for refining and updating this plan as circumstances change. Create a process to track deferred patients.
- Establish a process for triage of patients competing for limited resources, including admission, early discharge, and life support. Plan for the graceful transition to contingency and crisis standards of care. In a severe pandemic, not all patients in need of the ICU will have access. Normal staffing ratios and standard operating procedures will not be maintainable. The criteria used to make these decisions should be created in advance and formally sanctioned by the medical staff and hospital administration.
- Dedicate a full-time infection prevention practitioner to work on infection prevention aspects of the preparations by limiting the nosocomial spread of the virus. This will: (1) protect the healthcare workers and, thus, maintain a hospital workforce; (2) prevent the hospital from being a disease amplifier; and (3) protect the non-COVID-19 patients from infection, maintaining the ability to provide essential non-COVID-19 health care. Education, training, and exercises for healthcare workers should be included in this goal.
- Designate a medical director to work closely with the emergency manager and infection prevention practitioner.
- Create a pandemic preparedness committee (or use an existing emergency management committee) that includes representatives of all clinical and support departments as well as senior administrators. Establish the guidelines for allocating limited healthcare resources in a rational, ethical, and organized way so as to do the greatest good for the greatest number: Create criteria/clinical guidelines for use (or denial) of resource-intensive services (eg, admission, mechanical ventilation, invasive monitoring) based on national guidelines, such as the Crisis Standards of Care report. The legal and ethical framework for these decisions should be considered well in advance of a crisis. Alterations in hospital policy and procedures should be implemented by an active decision of the hospital leadership in consultation with the medical staff and civil authorities.
- Participate in a local healthcare coalition, which includes neighboring hospitals, local public health agencies, and emergency management. Members of multi-hospital health systems should integrate system-wide comprehensive and realistic planning based on actual CDC FluSurge projections in all hospitals in a region.
- Maintaining, augmenting, and stretching the hospital workforce by stockpiling PPE; purchase what is available, recognizing that a local outbreak could last at least several weeks to several months. Given the preeminent need to protect healthcare workers, we call for the use of N95 respirators for healthcare workers with direct contact with COVID-19 patients. This is in concert with the CDC's COVID-19 guidelines. Powered air-purifying respirators (PAPRs) should be available for use in high-risk aerosol-generating procedures.
- Limit the number of staff exposed to COVID-19 patients by cohorting (dedicated staff in dedicated units). Utilize overtime and long shifts for staff in the COVID-19 units to limit the number of staff needed. When possible, immune (recovered) staff in the COVID-19 units. Prevent infected staff from working (except with COVID-19 patients) by tracking staff who are sick and testing for COVID-19, log staff who have had confirmed COVID-19.
Take care of Healthcare Workers. Staffing will stretch further, and longer, when individuals feel appreciated. Allow self-care opportunities. Free staff from worry of their family members; “Organize in-home childcare for well children of healthcare workers if schools are closed, using screened volunteers. Provide medical daycare for sick family members. Coordinate plans with other hospitals to recruit and use volunteers.”

Advocacy

“The hospital will never be healthy for patients if it’s not a healthy environment for nurses, where their voices are heard and where they can care for their patients and use the full extent of their knowledge, abilities, and skills. After all, hospitals today have become one big intensive care unit: all patients need intensive caring.”

Tilda Shalof, RN, BScN, CNCC (C) | Moral Distress Project

The ANA is speaking out to Congress to advocate for proper pandemic resources:

ADD YOUR VOICE TO SHOUT LOUDER.

"Nurses have a responsibility per the Code of Ethics, the nurse promotes, advocates for and protects the rights, health and safety of all patients. We owe the same duty to self as others and a duty to advance the profession.”- American Nurses Association

1. Write your legislators about needed COVID-19 support for nurses: Nurses continue serving during the outbreak despite severe shortages in personal protective equipment (PPE) Tell your member of Congress to do everything possible to increase PPE prioritization and distribution.

2. Take the ANA COVID-19 Workplace Survey https://ana.co1.qualtrics.com/jfe/form/SV_4OpLErvMKgd6tud The COVID-19 pandemic puts nurses on the front line, and preparedness is critical to preventing community spread. ANA is gathering the perspectives and needs of nurses; data will be posted on www.nursingworld.org to shine a light on the needs of those providing care.

Critical Care and Emergency nurses are voicing growing concern for feelings of burn-out, exhaustion, and moral distress regarding the on-coming surge of choosing how to designate limited resources...including their own staffing. Those infected and recovering return to work before feeling 100%, reporting they feel burdened, as though they are abandoning their colleagues by being ill.

"WHAT WE DON'T NEED IN THE MIDST OF STRUGGLE IS SHAME FOR BEING HUMAN."

- BRENE BROWN

These feelings, often mislabeled as 'burn-out' are actually a well-documented phenomenon called "Moral Distress", as described in the Jan.2016, Journal of Emergency Nursing, "It's a Burden You Carry": Describing Moral Distress in Emergency Nursing, relates a survey of 28 emergency nurses who collectively described moral distress. It is "an inability to perform the obligations of nursing at the social justice level and [moral distress] is directly related to a lack of unit support, an overemphasis on technology to the exclusion of patient interaction, and the perception of a distinct disconnection between the administrators and the practitioners delivering care," Vol.42, (1), 37-46. https://www.jenonline.org/article/S0099-1767(15)00330-X/fulltext

To compound the emotional strain of these moral dilemmas, daily navigating the added stressors of the patient surge exhaust mental resources. When unaddressed, this is not sustainable, and it can produce long-term mental health disorders, substance abuse, and PTSD.
A research study conducted in frontline nurses in Wuhan, noted that nurses, especially women, reported experiencing psychological burden, when directly engaged care for patients with COVID-19. These new and daunting circumstances; limited ventilators and PPE, attending to personal needs during long shifts, and vigilant decontamination before leaving work and arriving home in order to protect family members, require deliberate attention to self-care, stress management, and wellness practices to maintain health and performance in a time of great need.

1. Self-Reflection, or checking-in "How am I really doing," is a good start. Physical indicators which may have an emotional origin; tight muscles, tension headaches, gastric distress, may be signs stress has become detrimental.

2. Identifying when you are 'not okay' is the first action needed to stabilize your mental health. After recognizing unhealthy stress, begin to employ reduction techniques.

The American Holistic Nurses Association recently released a Holistic Nursing Stress Management Strategies, free resource, to provide quick intervention for nurses. Even a "once-a-day" self-care goal gives permission to momentarily allow oneself to diffuse. Many nurses struggle to recognize this is an important priority. It is our hope to ease the burden of moral distress that front line nurses are enduring. Additional resources for ethical dilemma reflection and stress management:

- Sigma Webinar ~ COVID-19: What Are Our Professional and Ethical Obligations to Patients and Ourselves? (April 7, 2020 ~ 8:00 pm ET)
- Managing Healthcare Workers' Stress Associated with the COVID-19 Virus Outbreak (National Center for PTSD)
- Coronavirus and Mental Health: Taking Care of Ourselves During Infectious Disease Outbreaks (American Psychiatric Association)
- Shine: Calm Anxiety & Stress free app toolkit for COVID-19 anxiety, guided relaxation, meditations, daily motivational messages
- Headspace free stress, meditation, relaxation, and sleep app with NPI provider number
- UCLA Mindful: Meditations for Well-Being app with recorded mindfulness meditations and a weekly podcast
- The Society for Health Psychology wellness tools, a sleep app and trauma resources
- Calm Your Nervous System 20-minute free guided relaxation; headphones or earbuds allow background binaural technology for deeper response

MORAL DISTRESS PREVENTION

ETHICAL PREPARATION by Healthcare Entities

"To avoid harm, health agencies must plan now to implement crisis standards of care; they should not wait until the disease is widely detected in the community. First and foremost is the need to protect health workers delivering care in the midst of the crisis, for without them and their extraordinary efforts, the entire health system would collapse."


The Hastings Center offers Resources to help administrators plan for Surge Bioethical concerns:

- The Hastings Center & Ethical Framework
  Navigation: https://www.thehastingscenter.org/ethicalframeworkcovid19/
- Ethical Framework for Healthcare Institutions Guidelines for Institutional Ethics Services Responding to the Coronavirus Pandemic https://www.thehastingscenter.org/ethicalframeworkcovid19/
- https://www.thehastingscenter.org/briefingbook/pandemic/

Palliative Care

The World Health Organization reports the average death rate from COVID-19 is 2%-4%; the death rate among elderly patients is estimated between 15%-22%. Covid-19 fatality estimates factor in the exponential rate of increased deaths and confirmed cases. These current projections expect millions of cases and hundreds of thousands of deaths, (https://www.businessinsider.com/presentation-us-hospitals-preparing-for-millions-of-hospitalizations-2020-3). "An acute infection may be what collapses the 'house of cards' for a patient with serious or life-limiting illness,
"In this time, palliative care is just as critically needed as fluids, fever reducers, and respirators. We know the strength and extraordinary human kindness that palliative care professionals live every day, in every interaction with patients, with families, with colleagues, and communities. Their role in the pandemic is keeping the "care" in healthcare while patients and providers alike are under siege."

- National Association for Home Care and Hospice offered a Free webinar on March 13th 1-2pm EST [https://www.nahc.org/event/covid-19-the-impact-on-home-care-and-hospice/]
- COVID-19 resources from American Academy of Palliative Care and Hospice [http://aahpm.org/education/covid-19-resources]

**Telehealth**

"The need of the hour is to enable the healthcare industry to deliver better care with minimal exposure to the virus. Failure to do so would not only compromise containment but also lead to a medical staff shortage, a situation that the US cannot afford at this time," Softwarefinder.com Adopting Telemedicine successfully in the Times of COVID-19: [https://softwarefinder.com/resources/telemedicine-practice-set-up-guide.php]

- CMS has expanded telehealth services for Medicare beneficiaries temporarily. It means medical providers will get paid for providing telehealth services to Medicare patients across the country.
- US Department of Justice Drug Enforcement Agency (DEA), healthcare professionals can now prescribe a controlled substance to a patient using telehealth technology. The condition of establishing person to person contact, at least once, before prescribing controlled substances has been lifted during the public emergency.
- OCR, the privacy watchdog, won't impose penalties on providers who use non-HIPAA-compliant remote communications technology during the public health emergency.
- Nurse Webinars and Continuing Education on Demand resource offering free education on Federal Telehealth Reimbursement Policy, Procedures for Device Cleaning, Hospitalist coverage via Telemedicine, and specialties from Behavioral Health, to Neonatology [https://intouchhealth.com/learn/telehealth-webinars/]

**Field Hospitals**

Federal Emergency Management Agency (FEMA) Alternate Care Site (ACS) Toolkit to help state, local, tribal and territorial (SLTT) entities to address potential shortages in medical facilities during the 2020 COVID-19 pandemic. Note: large file may take a few minutes to open/download.

- On the West Coast, the US Army is establishing a 250-bed field hospital in Seattle, at the CenturyLink Event Center. Like many similar facilities in the United States, this hospital is not intended to treat COVID-19 patients.
- Mount Sinai Hospital in New York City partnered with the Samaritan's Purse humanitarian response organization to construct and begin operating a field hospital in Central Park. The overflow capacity provides 68 beds in 14 tents.

**Stories from the Front Line**

Curious what to expect? Need ideas for moral support activities? Do you need a place to share your frontline experience? The American Hospital Association is providing a space to show the world its heroes without capes.

#HealthcareHeroes [https://www.aha.org/issue-landing-page/2020-03-18-stories-front-lines]

**TO OUR HOLISTIC NURSES AND PROVIDERS AT THE BEDSIDE:**

We see you. We know you are tired. Please be kind to yourself. You matter. You are making a difference, one patient at a time.
Resources:

STRESS-MANAGEMENT

Staying Calm and Well in the Midst of the Covid19 Storm- Evidence-based Tactics that Work! [https://u.osu.edu/keepcalmcovid19/schedule/]

Self-Care and Stress Resilience for Home Health care Providers- [https://www.facebook.com/groups/149681983051525/]


CONTINUING EDUCATION & WEBINARS


Emergency Nurses Association- COVID Free webinar [https://www.youtube.com/channel/UCV6LMjCWUM7aVgJ5aV6uPA]

Pulmonary Care Webinars- Free from American Association of Critical Care Nurses [https://www.aacn.org/education/online-courses/covid-19-pulmonary-ards-and-ventilator-resources?sc_camp=D89A9158E9C34910A638B5F931DE4F0&_zs=1uTXQ&_zl=ewR22]

ADVOCACY

Tell your member of Congress to do everything possible to increase PPE prioritization and distribution to nurses and other frontline providers! [https://p2a.co/7Xuw9of]

AACCN Signs Joint Statement on Social Distancing - AACCN joined other critical care organizations urging federal, state and local officials to continue or initiate social distancing practices to slow the progress of the COVID-19 pandemic. [https://www.aacn.org/policy-and-advocacy/~/media/06b81d6a72de422f89e11f1ee429953b.axsh]

AACCN Signs Consensus Statement on Multiple Patients Per Ventilator- sharing mechanical ventilators cannot be done safely with current equipment. [https://www.aacn.org/policy-and-advocacy/~/media/866b160526234730b77695d04319065.axsh]

OpenWHO.org, a new interactive, web-based, knowledge-transfer platform offering online courses to improve the response to health emergencies from WHO.

COVID-19 in Children: Initial Characterization of the Pediatric Disease - pre-publication article that has been peer-reviewed for publication in Pediatrics.

Primary Care- Q&A: Interim protocols for COVID-19 in primary care

Printable "Symptoms of the Coronavirus" poster from the CDC. Also available in Spanish and simplified Chinese.

CMS guidelines for Medicare/Medicaid.

CMS Regulatory Changes to Help U.S. Healthcare System Address COVID-19 Patient Surge - provisions include authorizing hospitals to use PAs and NPs to the fullest extent possible.

STUDENTS

National Student Nurses Association's Guidance for Nursing Students during the COVID-19 Pandemic

Teaching Nursing Students How to Manage Crisis During COVID-19

INFECTION CONTROL & PUBLIC HEALTH

CDC TRANSPORT / ARRIVAL recommendations for healthcare professionals preparedness checklist confirmed or possible COVID-19

SUPPLY DONATION

FEMA online medical supplies and equipment form

Not an AHNA member? Learn more.